

AMENDMENT TO THE CLAIMS:

The currently pending claims, as originally filed, are provided as follows:

1 1. (Currently Amended) A method of constructing a lookup table of modes for encoding
2 data for transmission in a wireless communication channel from a transmit unit to a receive
3 unit, said method comprising:

4 a) selecting at least one short-term quality parameter ~~of said data~~ associated with
5 the communication channel as received by said receive unit;

6 b) determining a first-order statistical parameter of said at least one quality
7 parameter;

8 c) determining a second-order statistical parameter of said at least one quality
9 parameter; and

10 d) arranging said modes in said lookup table based on said first-order statistical
11 parameter and based on said second-order statistical parameter.

1 2. (Original) The method of claim 1, wherein said first-order statistical parameter and said
2 second-order statistical parameter are determined from a simulation of said wireless
3 communication channel.

1 3. (Original) The method of claim 1, wherein said first-order statistical parameter and said
2 second-order statistical parameter are determined from a field measurement of said wireless
3 communication channel.

1 4. (Original) The method of claim 1 further comprising:

2 a) selecting a communication parameter;

3 b) setting a target value of said communication parameter; and

4 c) arranging said modes in said lookup table based on said target value.

1 5. (Currently Withdrawn) The method of claim 4, wherein said communication parameter
2 is selected from the group consisting of bit error rate, packet error rate, data capacity, signal
3 quality, spectral efficiency and throughput.

1 6. (Original) The method of claim 4, wherein said communication parameter is a statistical
2 communication parameter.

1 7. (Original) The method of claim 4, further comprising:
2 a) measuring a measured value of said communication parameter in said wireless
3 communication channel;
4 b) assigning an adjustment to at least one of said first-order statistical parameter and said
5 second-order statistical parameter based on a difference between said measured value and
6 said target value.

1 8. (Currently Withdrawn) The method of claim 1, wherein said quality parameter is a
2 short-term quality parameter.

1 9. (Currently Amended) The method of claim 8, wherein said second-order statistical
2 parameter comprises a variance of said short-term quality parameter.

1 10. (Original) The method of claim 9, wherein said variance is selected from the group
2 consisting of temporal variance and frequency variance.

1 11. (Original) The method of claim 8, wherein said short-term quality parameter is selected
2 from the group consisting of signal-to-interference and noise ratio, signal-to-noise ratio and
3 power level.

1 12. (Original) The method of claim 1, wherein said first-order statistical parameter comprises
2 a mean of said at least one quality parameter.

1 13. (Original) The method of claim 1, wherein said second-order statistical parameter
2 comprises a variance of said at least one quality parameter.

1 14. (Original) The method of claim 13, wherein said data is transmitted at more than one
2 frequency and said variance is a frequency variance.

1 15. (Original) The method of claim 13, wherein said data is transmitted in a multi-carrier
2 scheme and said variance is a frequency variance.

1 16. (Original) The method of claim 13, wherein said variance is a temporal variance.

1 17. (Previously Withdrawn) The method of claim 1, wherein said transmitting step is
2 performed in accordance with a transmission technique selected from the group consisting of
3 OFDMA, FDMA, CDMA, TDMA.

1 18. (Currently Amended) A storage medium tangibly embodying a lookup table of modes
2 for encoding data for transmission in a wireless communication channel from a transmit unit
3 to a receive unit, said storage medium comprising instructions for:

4 a) selecting at least one short term quality parameter ~~of said data~~ associated with
5 the communication channel as received by said receive unit;

6 b) determining a first-order statistical parameter of said at least one quality
7 parameter;

8 c) determining a second-order statistical parameter of said at least one quality
9 parameter; and

10 d) arranging said modes in said lookup table based on said first-order statistical
11 parameter and based on said second-order statistical parameter.

1 19. (Original) The storage medium of claim 18, further comprising instructions for:

- 2 a) selecting a communication parameter;
3 b) setting a target value of said communication parameter; and
4 c) arranging said modes in said lookup table based on said target value.

1 20. (Previously Amended) The storage medium of claim 19, further comprising instructions
2 for:

- 3 a) measuring a measured value of said communication parameter in said wireless
4 communication channel; and
5 b) assigning an adjustment to at least one of said first-order statistical parameter and
6 said second-order statistical parameter based on a difference between said measured value and
7 said target value.

1 21. (New) A storage medium according to claim 18, wherein the second-order statistical
2 parameter is a variance of the quality parameter.

1 22. (New) A storage medium according to claim 21, wherein the communication channel is a
2 multi-carrier communication channel, and the second-order statistical parameter is a frequency
3 variance of the quality parameter.

1 23. (New) A receiver comprising:
2 a quality parameter statistics computation block to select at least one short-term quality
3 parameter associated with the communication channel as received by said receive unit, to
4 determine a first-order statistical parameter of said at least one quality parameter, and to
5 determine a second-order statistical parameter of said at least one quality parameter; and
6 a mode selection block, responsive to the quality parameter statistics computation block,
7 to arrange said modes in said lookup table based on said first-order statistical parameter and
8 based on said second-order statistical parameter.

1 24. (New) A receiver according to claim 23, wherein the receiver resides in a client device
2 communicatively coupled to a wireless communications network through a multi-carrier
3 communication channel.

1 25. (New) A receiver according to claim 24, wherein the second-order statistical
2 parameter is a frequency variance of the multi-carrier wireless communication channel.

1 26. (New) A receiver according to claim 24, wherein the mode selection block selects a
2 communication parameter, generates a target value of said communication parameter, and
3 arranges the modes in said lookup table based on said target value.

1 27. (New) A receiver according to claim 26, wherein the mode selection block measures a
2 value of said communication parameter in said wireless communication channel, and develops
3 an adjustment to at least one of said first-order statistical parameter and said second-order
4 statistical parameter based on a difference between said measured value and said target value.

1 28. (New) A system comprising:

2 _____ one or more substantially omnidirectional antennae(e), through which a wireless
3 communication channel with a remote device is selectively established;

4 a quality parameter statistics computation block, responsive to the communication
5 channel received via the antenna(e), to select at least one short-term quality parameter associated
6 with the communication channel as received by said receive unit, to determine a first-order
7 statistical parameter of said at least one quality parameter, and to determine a second-order
8 statistical parameter of said at least one quality parameter; and

9 a mode selection block, responsive to the quality parameter statistics computation block,
10 to arrange said modes in said lookup table based on said first-order statistical parameter and
11 based on said second-order statistical parameter.

1 29. (New) A system according to claim 28, wherein the communication channel is a multi-
2 carrier communication channel.

1 30. (New) A system according to claim 29, wherein the second-order statistical parameter
2 is a frequency variance of the multi-carrier wireless communication channel.

1 31. (New) A system according to claim 28, wherein the mode selection block selects a
2 communication parameter, generates a target value of said communication parameter, and
3 arranges the modes in said lookup table based on said target value.

1 32. (New) A system according to claim 31, wherein the mode selection block measures a
2 value of said communication parameter in said wireless communication channel, and develops
3 an adjustment to at least one of said first-order statistical parameter and said second-order
4 statistical parameter based on a difference between said measured value and said target value.

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Respectfully submitted,
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